REMARKS

This is a full and timely response to the non-final Office Action of July 14, 2004.

Reexamination, reconsideration, and allowance of the application and all presently pending

claims are respectfully requested.

Upon entry of this First Response, claims 1-7, 9, 11, 14, 16, 17, 19-22, 25-27, and 29-34

are pending in this application. Claims 1, 9, 11, 17, 21, 22, and 27 are directly amended herein,

and claims 8, 10, 12, 13, 15, 18, 23, 24, and 28 are canceled without prejudice or disclaimer.

Further, claims 29-34 are newly added. It is believed that the foregoing amendments add no

new matter to the present application.

Response to Claim Rejections

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art

reference disclose each element of the claim. See, *e.g.*, *W.L. Gore & Assoc., Inc. v. Garlock,*

Inc., 721 F.2d 1540, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983). Furthermore, in order for a claim

to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references

must suggest all features of the claimed invention to one of ordinary skill in the art. See, *e.g., In*

Re Dow Chemical, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.

871, 881 (C.C.P.A. 1981).

Claim 1

Claim 1 presently stands rejected under 35 U.S.C. §102 as allegedly being anticipated by

Demaline (U.S. Patent No. 5,968,393). Claim 1 reads as follows:

> 1. A system for controlling a temperature of a liquid residing
> within a tank, comprising:
> a temperature sensor configured to detect the temperature of the liquid;
> a temperature control element configured to alter the temperature of the liquid;
> a clock; and
> *logic configured to track usage of the temperature control element by*
> *monitoring an activation state of the temperature control element during a*
> *first time period while the temperature control element is being controlled*
> *based on a first temperature threshold, the logic further configured to*
> *automatically select, based on a time value indicated by the clock and the*
> *usage of the temperature control element during the first time period, a second*
> *temperature threshold for controlling the temperature control element during*
> *a second time period*, the logic further configured to perform a comparison
> between the selected temperature threshold and the temperature detected by the
> temperature sensor during the second time period and to control the temperature
> control element during the second time period based on the comparison.
> (Emphasis added).

Applicants respectfully assert that *Demaline* fails to disclose at least the features of claim 1

highlighted hereinabove. Accordingly, the 35 U.S.C. §102 rejection of claim 1, as amended, is

improper.

In this regard, *Demaline* appears to describe a hot water controller that adjusts a set point

temperature for a water heater tank over time. However, it appears that a "set point

temperature" for a particular time period is selected according to a predetermined schedule. See

column 2, lines 42-49. There is nothing in *Demaline* to indicate that a "temperature control

element" is monitored to track usage of the temperature control element and that a "set point

temperature" is automatically selected based on such usage. Thus, *Demaline* fails to disclose at

least the features of *"logic configured to track usage of the temperature control element by*

monitoring an activation state of the temperature control element...(and) to *automatically*

select, based on a time value indicated by the clock and *the usage of the temperature control*

element during the first time period, a second temperature threshold for controlling the temperature control element during a second time period," as described by claim 1. (Emphasis added).

For at least the above reasons, Applicants respectfully assert that *Demaline* fails to disclose each feature of pending claim 1. Accordingly, the 35 U.S.C. §102 rejection of claim 1 should be withdrawn.

Claims 2-7 and 9

Claims 2, 3, and 5 presently stand rejected in the Office Action under 35 U.S.C. §102 as allegedly being anticipated by *Demaline*. Further, claims 6, 7, and 9 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Demaline* in view of *Day* (U.S. Patent No. 6,375,087), and claim 4 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Demaline* in view of *Dosani* (U.S. Patent No. 5,808,277). Applicants submit that the pending dependent claims 2-7 and 9 contain all features of their independent claim 1. Since claim 1 should be allowed, as argued hereinabove, pending dependent claims 2-7 and 9 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 11

Claim 11 presently stands rejected under 35 U.S.C. §103 as allegedly being unpatentable

over *Demaline* in view of *Day*. Claim 11 reads as follows:

> 11. A system, comprising:
> a tank;
> a temperature sensor configured to detect a temperature of a liquid
> residing within the tank;
> a temperature control element coupled to the tank;
> ***memory for storing data indicative of a usage history of the
> temperature control element***; and
> logic configured to automatically control the temperature control element
> based on the data. (Emphasis added).

Applicants respectfully assert that the alleged combination of *Demaline* and *Day* fails to suggest

at least the features of claim 11 highlighted hereinabove. Accordingly, the 35 U.S.C. §103

rejection of claim 11, as amended, is improper.

In rejecting claim 11, it is asserted in the Office Action that *Demaline* teaches many of

the features of claim 11, but it is candidly admitted in the Office Action that *Demaline* fails to

teach "memory for storing data indicative of a usage history of the tank; and logic configured to

automatically control the temperature control element based on the data." However, it is alleged

in the Office Action that such features are taught by *Day*.

Applicants submit that *Day* appears to determine water usage by monitoring a water

meter 108 that indicates when water is drawn into or out of the water heater tank. See column

2, lines 61-62, and column 3, lines 8-12. There is nothing in *Day* to suggest controlling a

"temperature control element" based on "data indicative of a usage history of the ***temperature***

control element," as recited by pending claim 11. (Emphasis added).

For at least the above reasons, Applicants respectfully assert that the alleged

combination of *Demaline* and *Day* fails to suggest each feature of pending claim 11.

Accordingly, the 35 U.S.C. §103 rejection of claim 11 should be withdrawn.

Claims 14, 16, 19-21, and 30

Claims 14 and 19-21 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Demaline* in view of *Day*. Further, claim 16 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Demaline* in view of *Day* and in further view of *Dosani*, and claim 30 has been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 14, 16, 19-21, and 30 contain all features of their independent claim 11. Since claim 11 should be allowed, as argued hereinabove, pending dependent claims 14, 16, 19-21, and 30 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 22

Claim 22 presently stands rejected under 35 U.S.C. §103 as allegedly being unpatentable over *Demaline* in view of *Day*. Claim 22 reads as follows:

> 22. A system, comprising:
> a tank;
> a temperature sensor coupled to the tank;
> a temperature control element for controlling a temperature of a liquid residing within the tank; and
> *logic configured to determine a value indicative of an amount of time that the temperature control element is activated during a first time period and to establish a temperature threshold for a second time period based on the value*, the logic configured to perform a comparison between the temperature threshold and a temperature of the liquid detected by the temperature sensor during the second time period, the logic further configured to control the temperature control element based on the comparison. (Emphasis added).

Applicants respectfully assert the alleged combination of *Demaline* and *Day* fails to suggest each feature of claim 22.

In this regard, in both *Demaline* and *Day*, activation of a "temperature control element" of a water heater tank is controlled by logic associated with the water heater tank. However, there is nothing in either reference to suggest using an amount of time that the "temperature control element" is activated during one time period to establish a temperature threshold for another time period. Moreover, Applicants respectfully submit that the alleged combination of *Demaline* and *Day* fails to disclose at least the features of claim 22 highlighted above.

For at least the above reasons, Applicants respectfully assert that the 35 U.S.C. §103 rejection of claim 22, as amended, is improper and should be withdrawn.

Claims 25, 26, and 29

Claim 25 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Demaline* in view of *Day*. Further, claim 26 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Demaline* in view of *Day* and in further view of *Dosani*, and claim 29 has been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 25, 26, and 29 contain all features of their independent claim 22. Since claim 22 should be allowed, as argued hereinabove, pending dependent claims 25, 26, and 29 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 31

Claim 31 has been newly added via the amendments set forth herein. Claim 31

presently reads as follows:

> 31. A method, comprising the steps of:
> selectively activating a temperature control element to keep a liquid
> within a tank within a desired temperature range during a first time period;
> detecting activations of the temperature control element during the first
> time period;
> automatically selecting a temperature threshold for the temperature
> control element based on the detecting step;
> measuring a temperature of the liquid during a second time period;
> comparing the measured temperature to the temperature threshold; and
> activating the temperature control element based on the comparing.

Applicants submit that the cited art fails to disclose or suggest each of the above features of

claim 31. Accordingly, claim 31 is allowable in its present form.

Claims 32 and 33

Claims 32 and 33 have been newly added via the amendments set forth herein.

Applicants submit that the pending dependent claims 32 and 33 contain all features of their

independent claim 31. Since claim 31 should be allowed, as argued hereinabove, pending

dependent claims 32 and 33 should be allowed as a matter of law for at least this reason. *In re*

Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 34

Claim 34 has been newly added via the amendments set forth herein. Claim 34

presently reads as follows:

> 34. A method, comprising the steps of:
> detecting changes in temperature of a liquid within a tank over time;
> activating a temperature control element based on the changes in
> temperature;
> automatically selecting a temperature threshold based on the detecting
> step; and
> controlling the temperature control element based on the selected
> temperature threshold.

Applicants submit that the cited art fails to disclose or suggest each of the above features of

claim 34. Accordingly, claim 34 is allowable in its present form.

Allowable Subject Matter

Claims 17 and 27 have been indicated as allowable by the outstanding Office Action if

such claims are rewritten to include the limitations of their respective base claims. Accordingly,

pending claims 17 and 27 have been amended herein to include the features of their respective

base claims, and Applicant respectfully requests that the objections to claims 17 and 27 be

withdrawn.

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

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